

Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
 NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

(The following sample was submitted and identified by the applicant

as)

BASIC INFORMATION	
Type	HIGH POWER LED
Supplier/Company Name	EVERLIGHT
Address	NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN
Telephone/Fax/Email	886-2685-6688 / 886-2685-6699 / ALL: allenchiang@everlight.com
Responsible Person	
TEST REPORT NO	HIGHT-HIGH POWER LED EHP A2X SERIES
Product Name	Lighting Product 23/RGB33-P01/TR-SGS-15-Sep-2023
PRODUCT INFORMATION	
Part/component Sample Description	motive external lighting
Quantity (numbers or weight)	g
TEST P/N	OWER LED EHP A2X SERIES
Product Name	Lighting Product 23/RGB33-P01/TR
Lot No	6A1802VB
Country of Origin	CHINA
TEST INFORMATION	
Sample preparation	NO PREP
Test Method	IEC 62321, BS EN 14582
Test Results	Cr: 2 mg/kg, Pb: 2 mg/kg, Hg: 2 mg/kg, Cd: 2 mg/kg, Ni: 2 mg/kg, Cu: 2 mg/kg, Br: 2 mg/kg, Cl: 2 mg/kg, PBDEs: 5 mg/kg, Halogen: 50 mg/kg

(Sample Submitted By) : EVERLIGHT ELECTRONICS CO., LTD.)

(Sample Receiving Date) : 15-Sep-2023
 (Testing Period) : 15-Sep-2023 to 15-Sep-2023

(Test Results) : (Please refer to following pages).

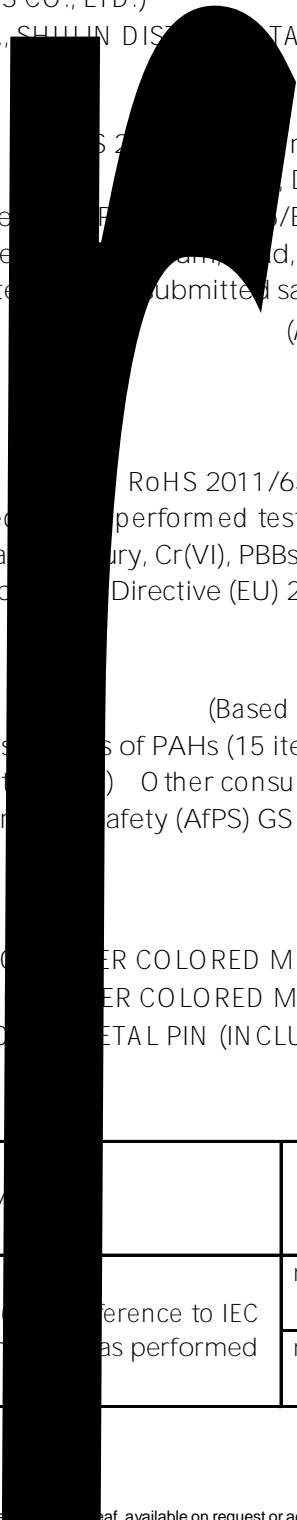
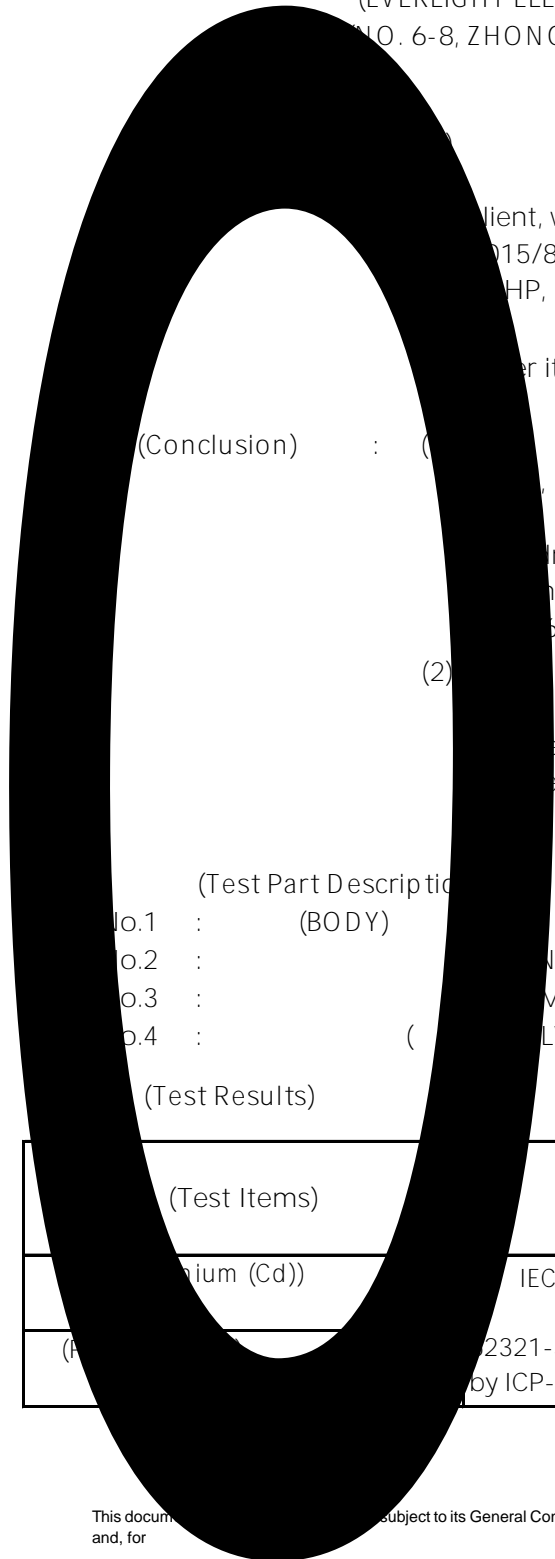
Jing Chang



PIN CODE: A35A415F

Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
 NO. 6-8, ZHONGHUA RD., SHULIN DISTRICT, TAIPEI CITY 23860, TAIWAN)



Annex II (EU) 2015/863
 DBP, BBP, DEHP, DIBP (As specified by
 client, with reference to EU Directive (EU) 2015/863 to determine
 lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP,
 DEHP, DIBP content of submitted sample(s).)
 (As specified by client, to test PAHs and

(Conclusion) : () , DBP, BBP,
 DIBP RoHS 2011/65/EU Annex II (EU) 2015/863
 (Based on performed tests on submitted sample(s), the test results
 for Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with
 the limits as set by Directive (EU) 2015/863 amending Annex II to Directive
 2011/65/EU.)

(2) (AfPS) GS PAHs
 (Based upon the performed tests on the submitted
 sample(s), the test results of PAHs (15 items) comply with the limits of PAHs
 for Consumer Products (Category 1) Other consumer products as set by German
 Committee on Product Safety (AfPS) GS PAHs.)

(Test Part Description)

- No.1 : (BODY)
- No.2 : (PLATING LAYER OF SILVER COLORED METAL PIN)
- No.3 : (MATERIAL OF SILVER COLORED METAL PIN)
- No.4 : (SILVER COLORED METAL PIN (INCLUDING THE PLATING LAYER))

(Test Results)

(Test Items)	(Method)	(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
Cadmium (Cd)	IEC 62321-5: 2013, as performed by ICP-OES.	mg/kg	2	n.d.	---	---	100
		mg/kg	2	n.d.	---	---	1000

Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)

(NO. 6-8, ZHONGHUA RD., SHULIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

	(Material)	(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
(Cadmium (Cd))	IEC 62321-4: 2017 reference to IEC 62321-4: 2017, analysis was performed by ICP-OES.	mg/kg	2	n.d.	---	---	1000
(Hexavalent Chromium (Cr(VI)))	IEC 62321-7-2: 2017 reference to IEC 62321-7-2: 2017, analysis was performed by UV-Vis.	mg/kg	8	n.d.	---	---	1000
(Cadmium (Cd))	IEC 62321-5: 2013 application of IEC 62321-5: 2013 and digestion by ICP-OES.	mg/kg	2	---	n.d.	---	100
(Lead (Pb))	IEC 62321-5: 2013, and digestion by ICP-OES.	mg/kg	2	---	3.33	---	1000
(Mercury (Hg))	IEC 62321-4: 2017 reference to IEC 62321-4: 2017, analysis was performed by ICP-OES.	mg/kg	2	---	n.d.	---	1000
(Cadmium (Cd))	IEC 62321-5: 2013, and digestion by ICP-OES.	mg/kg	2	---	---	n.d.	100
(Lead (Pb))	IEC 62321-5: 2013, and digestion by ICP-OES.	mg/kg	2	---	---	3.43	1000
(Mercury (Hg))	IEC 62321-4: 2017 reference to IEC 62321-4: 2017, analysis was performed by ICP-OES.	mg/kg	2	---	---	n.d.	1000

Test Report

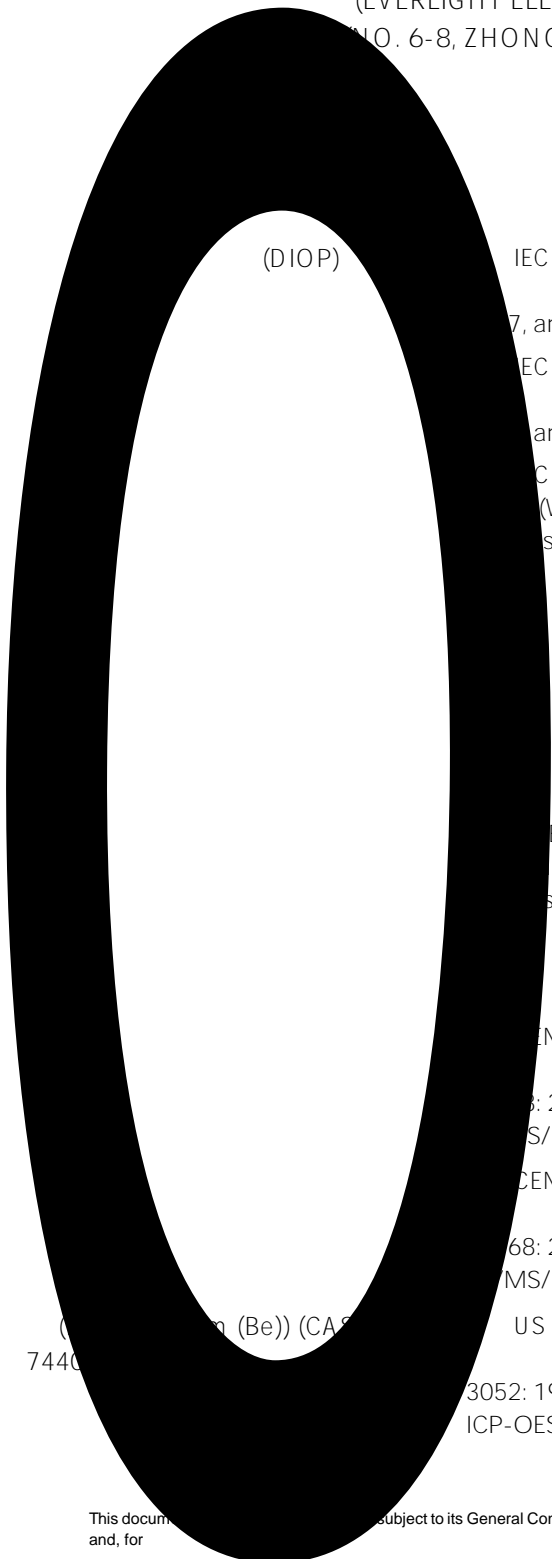
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(NO. 6-8, ZHONGHUA RD., SHULIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

	(M)	(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
benzophenone (BBP) (Benzophenone (BBP))	IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	---	---	1000
phthalate (DBP) (Dibutyl phthalate (DBP))	IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	---	---	1000
(2-ethylhexyl) phthalate (DEHP)	IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	---	---	1000
(DIBP) (Di-n-butyl phthalate (DIBP))	IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	---	---	1000
(DIDP) (Di-isodecyl phthalate (DIDP)) (CAS No. 761-40-0, 68515-49-1)	IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	---	---	-
(DINP) (Di-nonyl phthalate (DINP)) (CAS No. 553-12-0, 68515-48-0)	IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	---	---	-
(DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No. 117-82-8)	IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	---	---	-
(DNPP) (Di-n-propyl phthalate (DNPP)) (CAS No. 117-82-8)	IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	---	---	-
(DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No. 117-82-8)	IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	---	---	-
(DMP) (Di-methyl phthalate (DMP)) (CAS No. 117-82-8)	IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	---	---	-

Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
 NO. 6-8, ZHONGHUA RD., SHULIN DISTRICT, TAIPEI CITY 23860, TAIWAN)



(Material)	(Unit)	MDL	(Result)			(Limit)
			No.1	No.2	No.3	
(DIOP) IEC 62321-8: 2017 (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	---	---	-
IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	---	---	-
IEC 62321: 2008 / (With reference to IEC 62321: 2008, analysis was performed by GC/MS.)	mg/kg	5	n.d.	---	---	-
	mg/kg	50	262	---	---	-
EN 14582: 2016 (With reference to EN 14582: 2016, analysis was performed by GC/MS.)	mg/kg	50	n.d.	---	---	-
EN 14582: 2016 (With reference to EN 14582: 2016, analysis was performed by GC/MS.)	mg/kg	50	n.d.	---	---	-
CEN/TS 15968: 2010 (With reference to CEN/TS 15968: 2010, analysis was performed by GC/MS/MS.)	mg/kg	0.01	n.d.	---	---	-
CEN/TS 15968: 2010 (With reference to CEN/TS 15968: 2010, analysis was performed by GC/MS/MS.)	mg/kg	0.01	n.d.	---	---	-
(Cadmium (Be)) (CAS No. 7440) / US EPA 3052: 1996 (With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	---	---	-

Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
 NO. 6-8, ZHONGHUA RD., SHULIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

Hydrocarbon (Cyclic Aromatic Hydrocarbons) (PAHs)	(M)	(Unit)	MDL	(Result)			(Limit)
				No.1	No.2	No.3	
Benzo[a]pyrene (CAS No. 5033-93-2)		mg/kg	0.2	n.d.	---	---	
Benzo[e]pyrene (CAS No. 2090-93-1)		mg/kg	0.2	n.d.	---	---	
Benzo[a]anthracene (CAS No. 1528-24-3)		mg/kg	0.2	n.d.	---	---	
Benzo[b]fluoranthene (CAS No. 205-99-2)		mg/kg	0.2	n.d.	---	---	
Benzo[j]fluoranthene (CAS No. 205-82-3)		mg/kg	0.2	n.d.	---	---	
Benzo[k]fluoranthene (CAS No. 207-08-9)		mg/kg	0.2	n.d.	---	---	
Fluorene (CAS No.: 218-01-9)		mg/kg	0.2	n.d.	---	---	
Indeno[1,2,3-c,d]pyrene (CAS No. 83-39-5)		mg/kg	0.2	n.d.	---	---	
Anthrene (CAS No.: 85-01-1)		mg/kg	0.2	n.d.	---	---	
		mg/kg	0.2	n.d.	---	---	
		mg/kg	0.2	n.d.	---	---	
		mg/kg	-	n.d.	---	---	

Test Report

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(NO. 6-8, ZHONGHUA RD., SHULIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

PAHs
 PAHs
 Product Safety
 PAHs

(Parameter)	1 (Category 1)	2 (Category 2)		3 (Category 3)	
	(Materials intended to be placed in the mouth, or materials in toys (Directive 2009/48/EC) or articles for children up to 3 years of age with intended long-term skin contact (> 30 seconds))	(Materials that are not in Category 1, with intended or foreseeable long-term skin contact (> 30 seconds) or short-term repetitive contact with the skin)		(Materials not covered by Category 1 or 2, with intended or foreseeable short-term skin contact (< 30 seconds))	
		a. (Use by children under 14)	b. (Other consumer products)	a. (Use by children under 14)	b. (Other consumer products)
Naphthalene	< 1	< 2		< 10	
Phenanthrene	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Anthracene					
Fluoranthene					
Pyrene					
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[k]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1

Test Report

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(NO. 6-8, ZHONGHUA RD., SHULIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

PFAS R

PFAS

PFAS

PFAS

Quantitative technique used in this test is to analyze the structure of PFAS substances. However, PFAS acid and its salts with the same carbon number may have the same structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished from the contribution from PFAS acid or its salts. Therefore, the tested results display the sum concentrations of PFAS acid and its salts with the same carbon number group. The concentration of PFAS substance shown in the below table is the sum of all PFAS substances included in the tested results, please refer to the table for relevant information: (The list of substances are for reference only, it do not include all PFAS salts with the same carbon number group.)

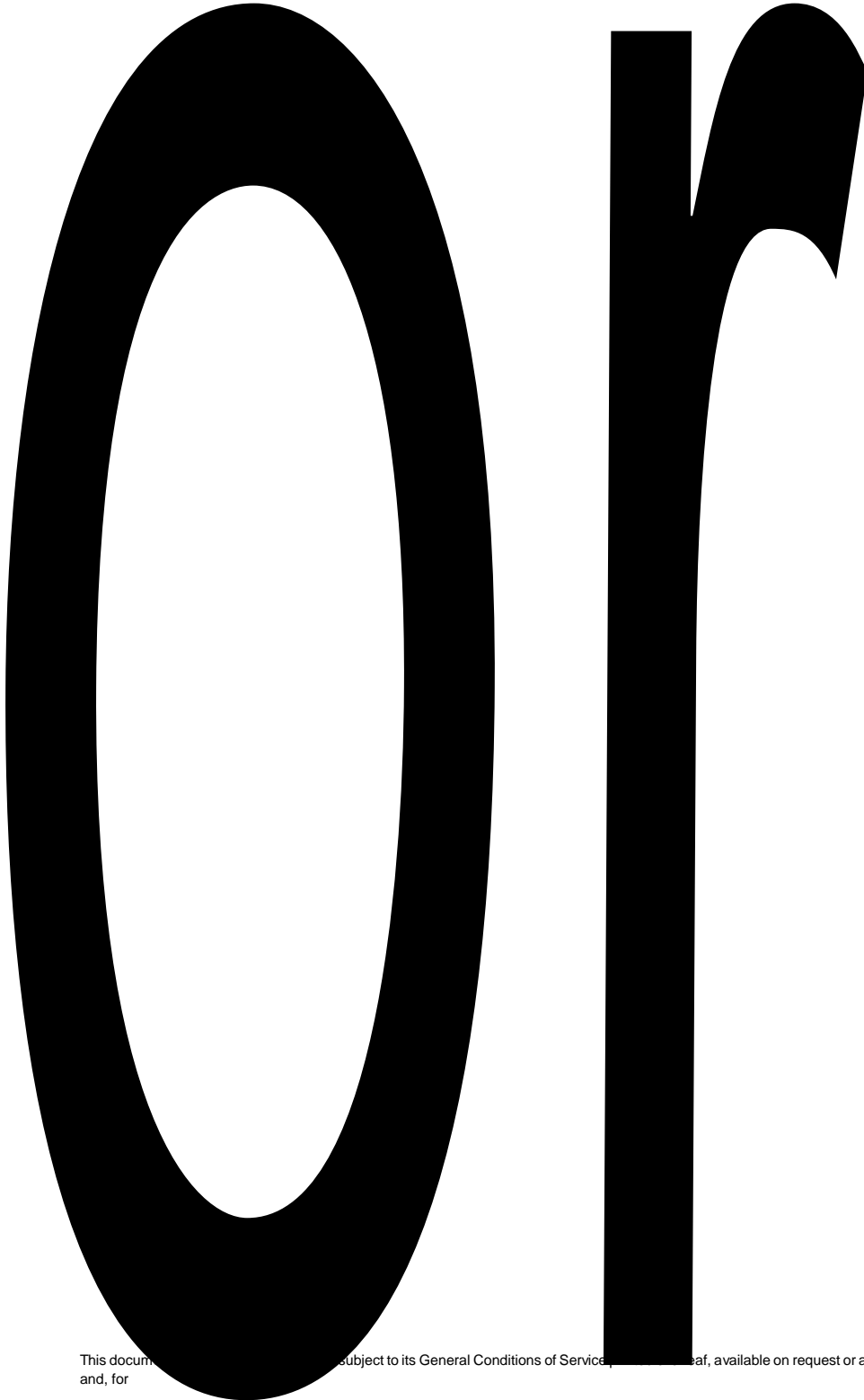
Classification of Substance (Substance Name)	CAS No.
Perfluorooctane sulfonates and its salts (PFOS and its salts) CAS No.: 1763-23-1 and its salts	2795-39-3
Perfluorooctane sulfonate (PFOS-K)	2795-39-3
Perfluorooctanesulfonate lithium salt (PFOS-Li)	29457-72-5
Perfluorooctanesulfonate ammonium salt (PFOS-NH ₄)	29081-56-9
Perfluorooctane sulfonate ethanolamine salt (PFOS-NH(OH) ₂)	70225-14-8
Perfluorooctanesulfonate tetraethylammonium salt (PFOS-N(C ₂ H ₅) ₄)	56773-42-3

Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)

(NO. 6-8, ZHONGHUA RD., SHULIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

Concentration	(Substance)	CAS No.
Perfluorooctane sulfonate (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	N-ethyl-N,N-dimethyl-2,2,3,3,4,4,5,5,6,6-decafluorooctane sulfonamide (PFOS-DDA)	251099-16-8
	Perfluorooctane sulfonamide (POSF)	307-35-7
	Perfluorooctanesulfonate magnesium salt (PFOS-Mg)	91036-71-4
	Perfluorooctanesulfonate sodium salt (PFOS-Na)	4021-47-0
Perfluorooctanoic acid and its salts (PFOA and its salts) (CAS No.: 335-67-1 and its salts)	Perfluorooctanoic acid sodium salt (PFOA-Na)	335-95-5
	Perfluorooctanoic acid potassium salt (PFOA-K)	2395-00-8
	Perfluorooctanoic acid silver salt (PFOA-Ag)	335-93-3
	Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	Perfluorooctanoate (APFO)	3825-26-1
	Perfluorooctanoic acid lithium salt (PFOA-Li)	17125-58-5



Test Report

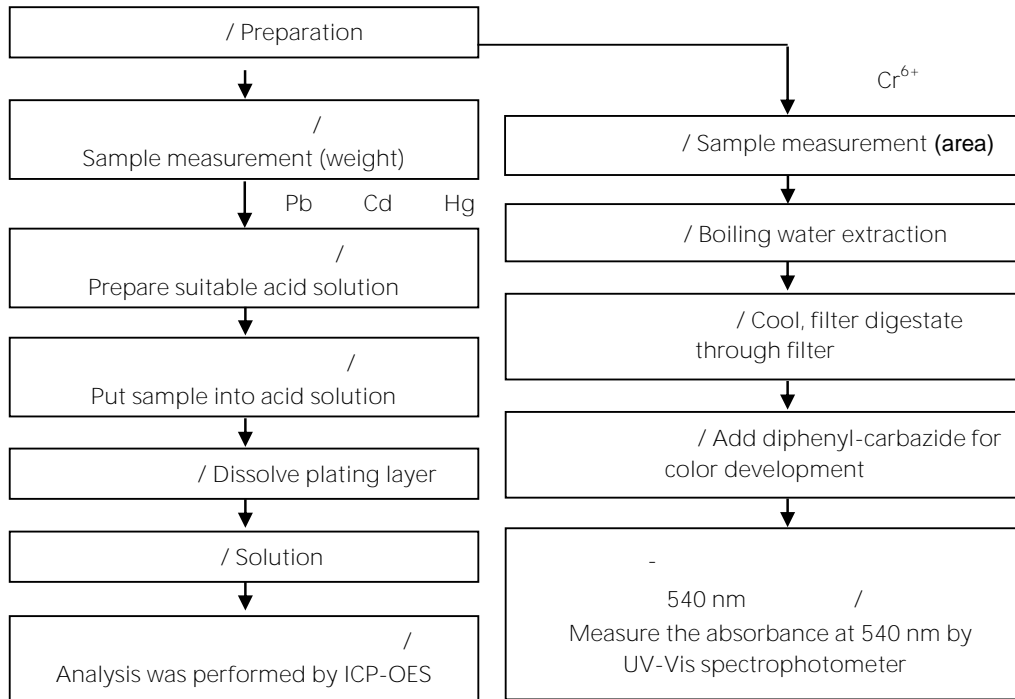
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 NO. 6-8, ZHONGHUA RD., SHILIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

/ Flow chart of stripping method for metal analysis

/ The plating layer

of samples were dissolved totally by pre-conditioning method according to below flow chart.

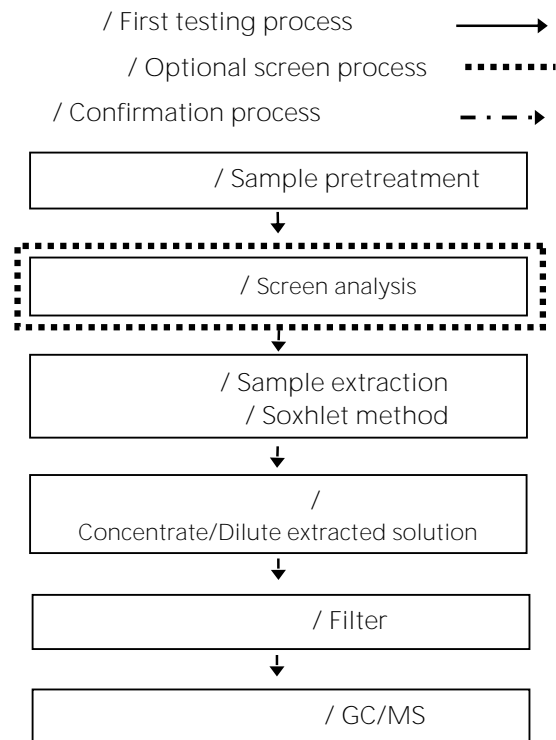
Cr⁶⁺ test method excluded



Test Report

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(NO. 6-8, ZHONGHUA RD., SHILIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

/ Analytical flow chart - PBBs/PBDEs

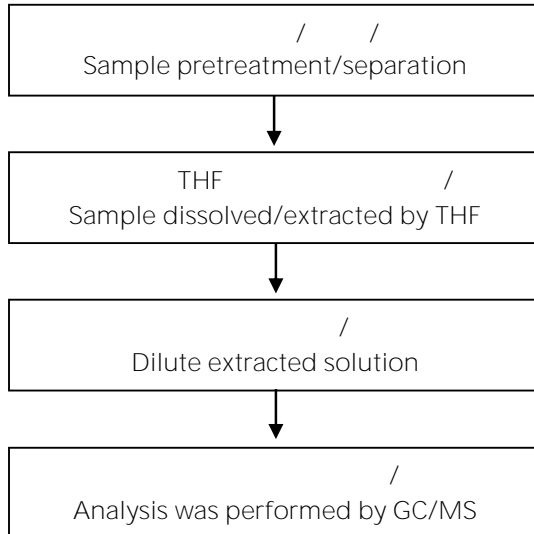


Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
NO. 6-8, ZHONGHUA RD., SHILIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

/ Analytical flow chart - Phthalate

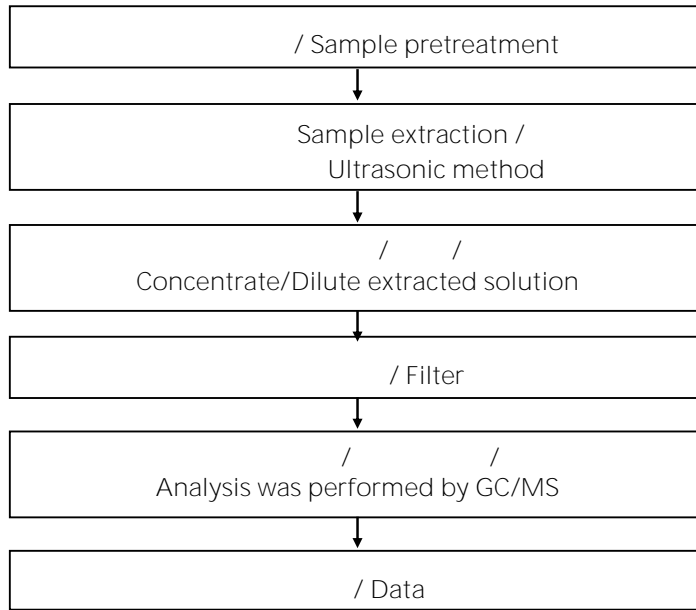
/Test method: IEC 62321-8



Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
(NO. 6-8, ZHONGHUA RD., SHULIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

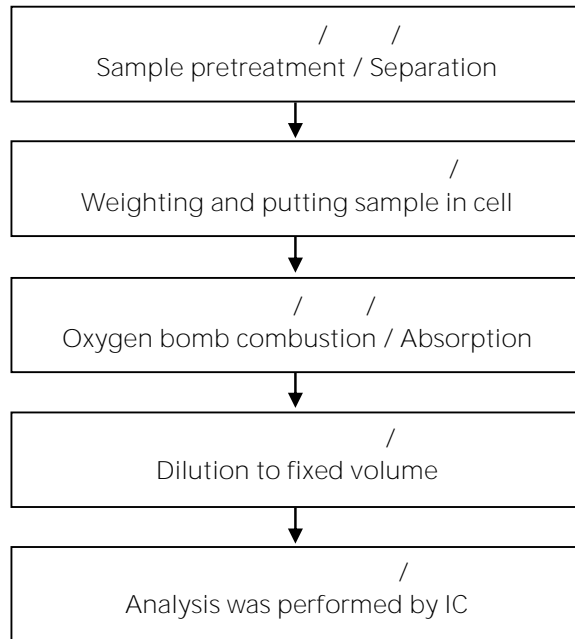
/ Analytical flow chart - HBCDD



Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
NO. 6-8, ZHONGHUA RD., SHULIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

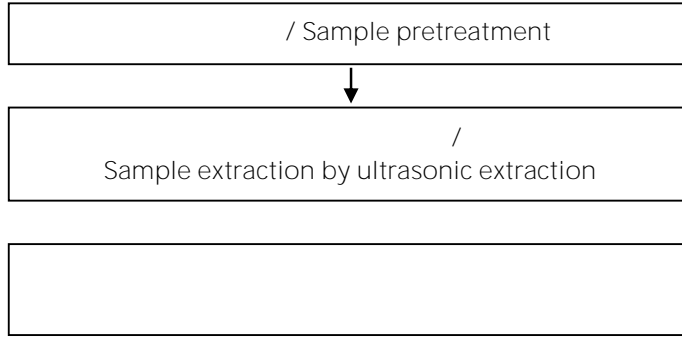
/ Analytical flow chart - Halogen



Test Report

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NO. 6-8, ZHONGHUA RD., SHILIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

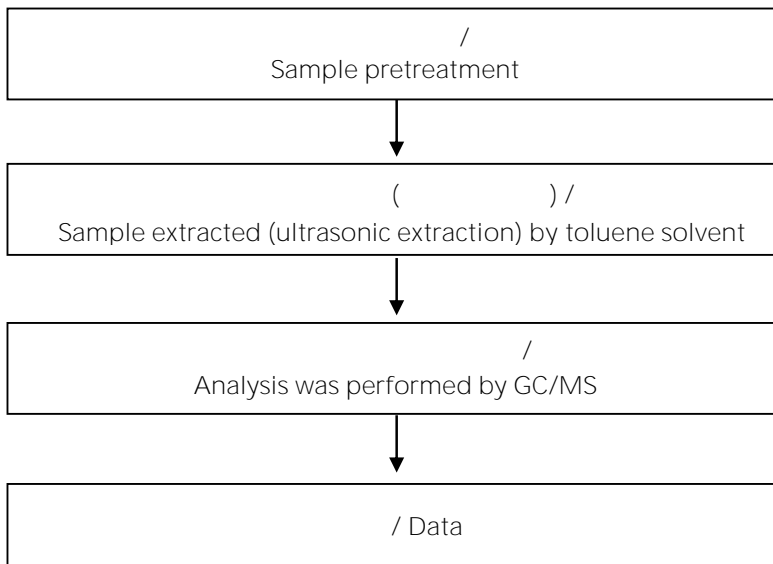
(/ /) / Analytical flow
chart - PFAS (including PFOA/PFOS/its related compound, etc.)



Test Report

(EVERLIGHT ELECTRONICS CO., LTD.)
NO. 6-8, ZHONGHUA RD., SHILIN DIST., TAIPEI CITY 23860, TAIWAN)

Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)



Test Report

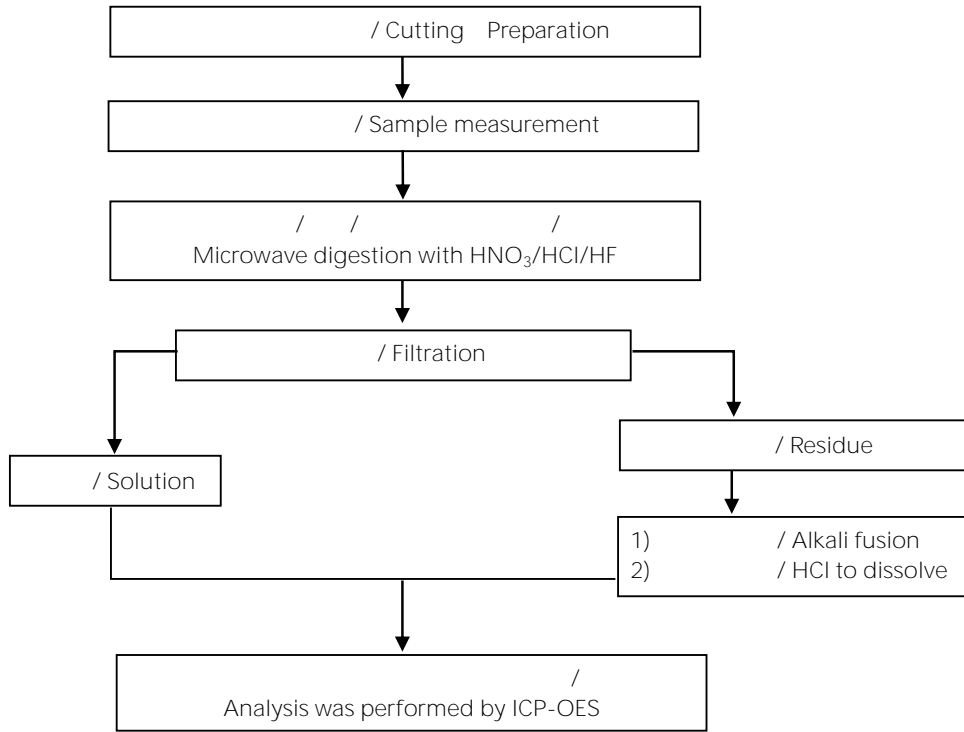
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(NO. 6-8, ZHONGHUA RD., SHILIN DISTRICT, TAIPEI CITY 23860, TAIWAN)

/ Analytical flow chart of elements (Heavy metal included)

These samples were dissolved totally by pre-conditioning method according to below flow chart.

/Reference method US EPA 3051A US EPA 3052



* US EPA 3051A

/ US EPA 3051A method does not add HF.

Test Report

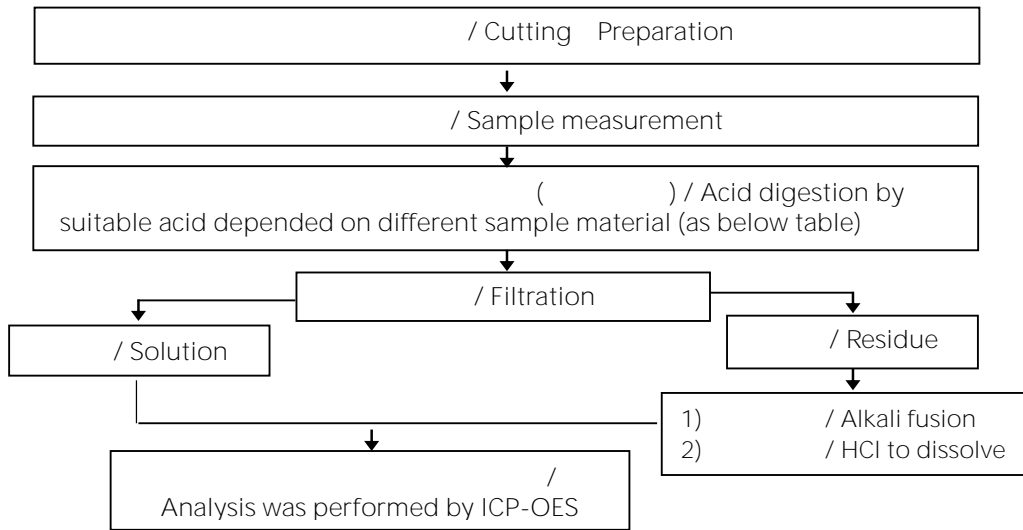
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ICP-OES

(Flow chart of digestion for the elements analysis performed by ICP-OES)

/ These samples were dissolved totally by pre-conditioning method according to below flow chart.



/ Steel, copper, aluminum, solder	/ Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
/ Glass	/ HNO ₃ , HF
/ Gold, platinum, palladium, ceramic	/ Aqua regia
/ Silver	/ HNO ₃
/ Plastic	/ H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
/ Others	/ Added appropriate reagent to total digestion

Test Report

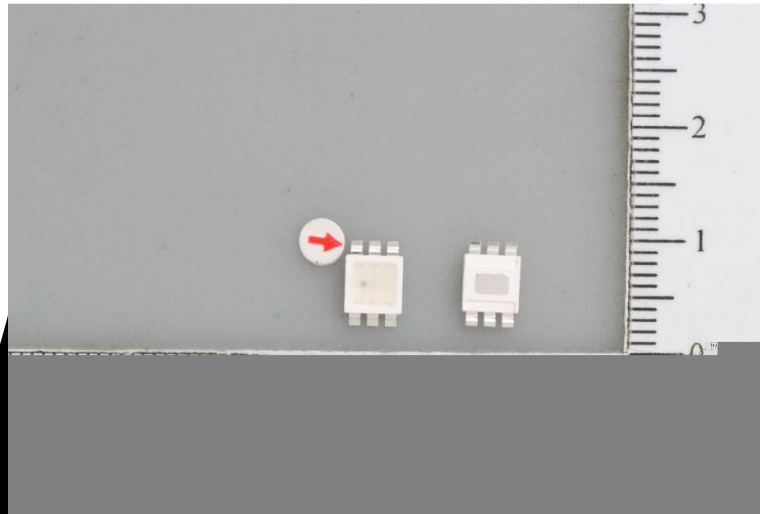
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(Sample / part is made by [redacted] / [redacted].*)
[redacted] (s shown on the photo.)



ETR23900021 NO.2



Test Report

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ETR23900021 NO.4



** (End of Report) **